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Notice of Allowability	Application No.	Applicant(s)	
	10/761,515	DIMAIO, ANTHONY-JOSEPH	
	Examiner	Art Unit	
	Ling-Siu Choi	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 05/12/2006.
2. ☒ The allowed claim(s) is/are 1-10 and 15-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|---|

DETAILED ACTION

1. This Office Action is in response to the Amendment filed May 12, 2006. Claims 11-14 were canceled and claims 15-18 have been added. Claims 1-10 and 15-18 are now pending.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. The application has been amended as follows:

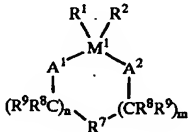
In Specification, page 1, line 5, change "10/163,132, filed June 4, 2002." to --10/163,132, filed June 4, 2002, now US 6,706,828 B2. --

Allowable Subject Matter

4. Claims 1-10 and 15-18 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Grumel et al. [Macromol. Mater. Eng. 286, 480-487(2001)], Winter et al. (US 5,672,668), and Ewen [J. Am. Chem. Soc., **106**, 6355-6364 (1984)].

A substantially amorphous poly(α -olefin) possessing	
M_w	about 500-about 50,000
M_w/M_n	about 1.0-about 10
Kv_{100}	about 10-about 10,000
iodine number	about 0.0-about 10
T_g	< about - 60°C
<p>the poly(α-olefin) being prepared by a process comprising polymerizing at least one α-olefin in the presence of hydrogen + a catalyst, wherein the catalyst is obtained by combining a cocatalyst + a metallocene catalyst comprising <u>at least one meso compound</u> in the general formula:</p> <div style="text-align: center;">  </div> <p>wherein A¹ and A² are independently selected from the group consisting of mononuclear and polynuclear hydrocarbons</p>	

(summary of claim 1)

Grumel et al. disclose an isotactic poly(decene) obtained in the presence of a catalyst system comprising isospecific Et(Ind)₂ZrCl₂ and MAO, wherein the poly(decene) has M_n (GPC) of 3200 and M_w of 7600 and M_w/M_n of 2.36 (col 1 of page 481; Table 1-Entry 13; col. 2 of page 482). In view of Table 3, the polymer obtained by

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using a meso-metallocene as a catalyst is different from one obtained in the presence of a rac-metallocene:

Example		Kv100	Iodine no.	Mw	Mw/Mn	Tg(°C)
1	meso	39.4	2.2	3,160	1.90	-75.8
C	rac	116	2.8	7,084	2.4	-72.4

Thus, Grumel et al. do not teach or fairly suggest a substantially amorphous poly (α -olefin) having specific properties and being obtained in the presence of a specific meso-metallocene.

Winter et al. disclose an olefin polymer obtained in the presence of a catalyst comprising a transition-metal compound and a cocatalyst, wherein the transition-metal compound is a metallocene in the meso-form or meso-rac mixture; the cocatalyst is aluminoxane; the α -olefin is $R_a\text{-CH=CH-R}_b$ with R_a and R_b being identical or different and being a hydrogen atom or a hydrocarbon radical having 1 to 14 carbon atoms (claims 1 and 4). Winter et al. further disclose the polyolefin is atactic and $M_w > 1000,000$ g/mol (col. 1, lines 49-52). Thus, Winter et al do not teach or fairly suggest a substantially amorphous poly(α -olefin) having M_w between about 500 to about 50,000.

Ewen discloses an atactic polypropylene obtained in the presence of a catalyst system comprising meso-Et [ind]₂TiCl₂ or meso-Et [ind]₂ZrCl₂ and methylalumoxane (abstract; col. 1 of page 6358). Ewen further disclose that the atactic polypropylene has number average molecular weight (M_n) of 9.66×10^4 and **weight average molecular weight (M_w) of 1.54×10^5** , which lead to $M_w/M_n = 1.59$ (Table VII). Thus, Ewen does not teach or fairly suggest a substantially amorphous poly(α -olefin) having M_w between

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about 500 to about 50,000.

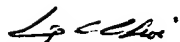
In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.



LING-SUI CHOI
PRIMARY EXAMINER

May 25, 2006